

SEQUENCE LISTING

<110> Donna T. Ward
Andrew T. Watt

<120> ANTISENSE MODULATION OF EIF2C1 EXPRESSION

<130> RTS-0236

<160> 88

<210> 1
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 1
tccgtcatcg ctcctcaggg

20

<210> 2
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 2
atgcattctg cccccaagga

20

<210> 3
<211> 7478
<212> DNA
<213> Homo sapiens

<220>

<220>

<221> CDS

<222> (214)...(2787)

<400> 3			
actggcagct ggccggggc tcgcagtgaa agctgctgca ggctccgcgg cggccggcaac	60		
ggaggctcg ggggggggg cgcgagcgcc cggggcttgg aggggagccg agcccgcc	120		
ggatcccgaa ctagccctt caccgtggac ttacacgtt	180		
ccggccgc tgaccccgcc acggatataat ggg atg gaa gct gga ccc tcc gga	234		
Met Glu Ala Gly Pro Ser Gly			
1	5		
gca gct ggc gct tac ctg ccc ccc ctg cag cag gtg ttc cag cca	282		
Ala Ala Ala Gly Ala Tyr Leu Pro Pro Leu Gln Gln Val Phe Gln Ala			
10	15	20	
cct cgc cgg cct ggc att ggc act gtg ggg aaa cca atc aag ctc ctg	330		
Pro Arg Arg Pro Gly Ile Gly Thr Val Gly Lys Pro Ile Lys Leu Leu			
25	30	35	
gcc aat tac ttt gag gtg gac atc cct aag atc gac gtg tac cac tac	378		
Ala Asn Tyr Phe Glu Val Asp Ile Pro Lys Ile Asp Val Tyr His Tyr			
40	45	50	55
gag gtg gac atc aag ccg gat aag tgt ccc cgt aga gtc aac ccg gaa	426		
Glu Val Asp Ile Lys Pro Asp Lys Cys Pro Arg Arg Val Asn Arg Glu			
60	65	70	
gtg gtg gaa tac atg gtc cag cat ttc aag cct cag atc ttt ggt gat	474		
Val Val Glu Tyr Met Val Gln His Phe Lys Pro Gln Ile Phe Gly Asp			
75	80	85	
cgc aag cct gtg tat gat gga aag aac att tac act gtc aca gca	522		
Arg Lys Pro Val Tyr Asp Gly Lys Lys Asn Ile Tyr Thr Val Thr Ala			
90	95	100	
ctg ccc att ggc aac gaa cgg gtc gac ttt gag gtg aca atc cct ggg	570		
Leu Pro Ile Gly Asn Glu Arg Val Asp Phe Glu Val Thr Ile Pro Gly			
105	110	115	
gaa ggg aag gat cga atc ttt aag gtc tcc atc aag tgg cta gcc att	618		

Glu Gly Lys Asp Arg Ile Phe Lys Val Ser Ile Lys Trp Leu Ala Ile
 120 125 130 135
 gtg agc tgg cga atg ctg cat gag gcc ctg gtc agc ggc cag atc cct 666
 Val Ser Trp Arg Met Leu His Glu Ala Leu Val Ser Gly Gln Ile Pro
 140 145 150
 gtt ccc ttg gag tct gtg caa gcc ctg gat gtg gcc atg agg cac ctg 714
 Val Pro Leu Glu Ser Val Gln Ala Leu Asp Val Ala Met Arg His Leu
 155 160 165
 gca tcc atg agg tac acc cct gtg ggc cgc tcc ttc tca ccg cct 762
 Ala Ser Met Arg Tyr Thr Pro Val Gly Arg Ser Phe Phe Ser Pro Pro
 170 175 180
 gag ggc tac tac cac ccg ctg ggg ggt ggg cgc gaa gtc tgg ttc ggc 810
 Glu Gly Tyr Tyr His Pro Leu Gly Gly Arg Glu Val Trp Phe Gly
 185 190 195
 ttt cac cag tct gtg cgc cct gcc atg tgg aag atg atg ctc aac att 858
 Phe His Gln Ser Val Arg Pro Ala Met Trp Lys Met Met Leu Asn Ile
 200 205 210 215
 gat gtc tca gcc act gcc ttt tat aag gca cag cca gtg att gag ttc 906
 Asp Val Ser Ala Thr Ala Phe Tyr Lys Ala Gln Pro Val Ile Glu Phe
 220 225 230
 atg tgt gag gtg ctg gac atc agg aac ata gat gag cag ccc aag ccc 954
 Met Cys Glu Val Leu Asp Ile Arg Asn Ile Asp Glu Gln Pro Lys Pro
 235 240 245
 ctc acg gac tct cag cgc gtt cgc ttc acc aag gag atc aag ggc ctg 1002
 Leu Thr Asp Ser Gln Arg Val Arg Phe Thr Lys Glu Ile Lys Gly Leu
 250 255 260
 aag gtg gaa gtc acc cac tgt gga cag atg aag agg aag tac cgc gtg 1050
 Lys Val Glu Val Thr His Cys Gly Gln Met Lys Arg Lys Tyr Arg Val
 265 270 275
 tgt aat gtt acc cgt cgc cct gct agc cat cag aca ttc ccc tta cag 1098
 Cys Asn Val Thr Arg Arg Pro Ala Ser His Gln Thr Phe Pro Leu Gln
 280 285 290 295
 ctg gag agt gga cag act gtg gag tgc aca gtg gca cag tat ttc aag 1146

Leu Glu Ser Gly Gln Thr Val Glu Cys Thr Val Ala Gln Tyr Phe Lys
 300 305 310
 cag aaa tat aac ctt cag ctc aag tat ccc cat ctg ccc tgc cta caa 1194
 Gln Lys Tyr Asn Leu Gln Leu Lys Tyr Pro His Leu Pro Cys Leu Gln
 315 320 325
 gtt ggc cag gaa caa aag cat acc tac ctt ccc cta gag gtc tgt aac 1242
 Val Gly Gln Glu Gln Lys His Thr Tyr Leu Pro Leu Glu Val Cys Asn
 330 335 340
 att gtg gct ggg cag cgc tgt att aag aag ctg acc gac aac cag acc 1290
 Ile Val Ala Gly Gln Arg Cys Ile Lys Lys Leu Thr Asp Asn Gln Thr
 345 350 355
 tcg acc atg ata aag gcc aca gct aga tcc gct cca gac aga cag gag 1338
 Ser Thr Met Ile Lys Ala Thr Ala Arg Ser Ala Pro Asp Arg Gln Glu
 360 365 370 375
 gag atc agt cgc ctg atg aag aat gcc agc tac aac tta gat ccc tac 1386
 Glu Ile Ser Arg Leu Met Lys Asn Ala Ser Tyr Asn Leu Asp Pro Tyr
 380 385 390
 atc cag gaa ttt ggg atc aaa gtg aag gat gac atg acg gag gtg aca 1434
 Ile Gln Glu Phe Gly Ile Lys Val Lys Asp Asp Met Thr Glu Val Thr
 395 400 405
 ggg cga gtg ctg ccg gcg ccc atc ttg cag tac ggc ggc cggy aac cggy 1482
 Gly Arg Val Leu Pro Ala Pro Ile Leu Gln Tyr Gly Arg Asn Arg
 410 415 420
 gcc att gcc aca ccc aat cag ggt gtc tgg gac atg cgg ggg aaa cag 1530
 Ala Ile Ala Thr Pro Asn Gln Gly Val Trp Asp Met Arg Gly Lys Gln
 425 430 435
 ttc tac aat ggg att gag atc aaa gtc tgg gcc atc gcc tgc ttc gca 1578
 Phe Tyr Asn Gly Ile Glu Ile Lys Val Trp Ala Ile Ala Cys Phe Ala
 440 445 450 455
 ccc caa aaa cag tgt cga gaa gag gtg ctc aag aac ttc aca gac cag 1626
 Pro Gln Lys Gln Cys Arg Glu Glu Val Leu Lys Asn Phe Thr Asp Gln
 460 465 470
 ctg cgg aag att tcc aag gat gcg ggg atg cct atc cag ggt caa cct 1674

Leu Arg Lys Ile Ser Lys Asp Ala Gly Met Pro Ile Gln Gly Gln Pro
 475 480 485

tgt ttc tgc aaa tat gca cag ggg gca gac agc gtg gag cct atg ttc 1722
 Cys Phe Cys Lys Tyr Ala Gln Gly Ala Asp Ser Val Glu Pro Met Phe
 490 495 500

cggtt ctc aag aac acc tac tca ggg ctg cag ctc att att gtc atc 1770
 Arg His Leu Lys Asn Thr Tyr Ser Gly Leu Gln Leu Ile Ile Val Ile
 505 510 515

ctgtt cca ggg aag acg ccg gtg tat gct gag gtg aaa cgt gtc gga gat 1818
 Leu Pro Gly Lys Thr Pro Val Tyr Ala Glu Val Lys Arg Val Gly Asp
 520 525 530 535

aca ctc ttg gga atg gct acg cag tgt gtg cag gtg aag aac gtg gtc 1866
 Thr Leu Leu Gly Met Ala Thr Gln Cys Val Gln Val Lys Asn Val Val
 540 545 550

aag acc tca cct cag act ctg tcc aac ctc tgc ctc aag atc aat gtc 1914
 Lys Thr Ser Pro Gln Thr Leu Ser Asn Leu Cys Leu Lys Ile Asn Val
 555 560 565

aaa ctt ggt ggc att aac aac atc cta gtc cca cac cag cgc tct gcc 1962
 Lys Leu Gly Gly Ile Asn Asn Ile Leu Val Pro His Gln Arg Ser Ala
 570 575 580

gtt ttt caa cag cca gtg ata ttc ctg gga gca gat gtt aca cac ccc 2010
 Val Phe Gln Gln Pro Val Ile Phe Leu Gly Ala Asp Val Thr His Pro
 585 590 595

cca gca ggg gat ggg aaa aaa cct tct atc aca gca gtg gta ggc agt 2058
 Pro Ala Gly Asp Gly Lys Lys Pro Ser Ile Thr Ala Val Val Gly Ser
 600 605 610 615

atg gat gcc cac ccc agc cga tac tgt gct act gtg cgg gta cag cga 2106
 Met Asp Ala His Pro Ser Arg Tyr Cys Ala Thr Val Arg Val Gln Arg
 620 625 630

cca cgg caa gag atc att gaa gac ttg tcc tac atg gtg cgt gag ctc 2154
 Pro Arg Gln Glu Ile Ile Glu Asp Leu Ser Tyr Met Val Arg Glu Leu
 635 640 645

ctc atc caa ttc tac aag tcc acc cgt ttc aag cct acc cgc atc atc 2202

Leu Ile Gln Phe Tyr Lys Ser Thr Arg Phe Lys Pro Thr Arg Ile Ile
 650 655 660
 ttc tac cga gat ggg gtg cct gaa ggc cag cta ccc cag ata ctc cat 2250
 Phe Tyr Arg Asp Gly Val Pro Glu Gly Gln Leu Pro Gln Ile Leu His
 665 670 675
 tat gag cta ctg gcc att cgt gat gcc tgc atc aaa ctg gaa aag gac 2298
 Tyr Glu Leu Leu Ala Ile Arg Asp Ala Cys Ile Lys Leu Glu Lys Asp
 680 685 690 695
 tac cag cct ggg atc act tat att gtg gtg cag aaa cgc cat cac acc 2346
 Tyr Gln Pro Gly Ile Thr Tyr Ile Val Val Gln Lys Arg His His Thr
 700 705 710
 cgc ctt ttc tgt gct gac aag aat gag cga att ggg aag agt ggt aac 2394
 Arg Leu Phe Cys Ala Asp Lys Asn Glu Arg Ile Gly Lys Ser Gly Asn
 715 720 725
 atc cca gct ggg acc aca gtg gac acc aac atc acc cac cca ttt gag 2442
 Ile Pro Ala Gly Thr Thr Val Asp Thr Asn Ile Thr His Pro Phe Glu
 730 735 740
 ttt gac ttc tat ctg tgc agc cac gca ggc atc cag ggc acc agc cga 2490
 Phe Asp Phe Tyr Leu Cys Ser His Ala Gly Ile Gln Gly Thr Ser Arg
 745 750 755
 cca tcc cat tac tat gtt ctt tgg gat gac aac cgt ttc aca gca gat 2538
 Pro Ser His Tyr Tyr Val Leu Trp Asp Asp Asn Arg Phe Thr Ala Asp
 760 765 770 775
 gag ctc cag atc ctg acg tac cag ctg tgc cac act tac gta cga tgc 2586
 Glu Leu Gln Ile Leu Thr Tyr Gln Leu Cys His Thr Tyr Val Arg Cys
 780 785 790
 aca cgc tct gtc tct atc cca gca cct gcc tac tat gcc cgc ctg gtg 2634
 Thr Arg Ser Val Ser Ile Pro Ala Pro Ala Tyr Tyr Ala Arg Leu Val
 795 800 805
 gct ttc cgg gca cga tac cac ctg gtg gac aag gag cat gac agt gga 2682
 Ala Phe Arg Ala Arg Tyr His Leu Val Asp Lys Glu His Asp Ser Gly
 810 815 820
 gag ggg agc cac ata tcg ggg cag agc aat ggg cgg gac ccc cag gcc 2730

10007078-11-00000001

Glu Gly Ser His Ile Ser Gly Gln Ser Asn Gly Arg Asp Pro Gln Ala
 825 830 835

```

ctg gcc aaa gcc gtg cag gtt cac cag gat act ctg cgc acc atg tac 2778
Leu Ala Lys Ala Val Gln Val His Gln Asp Thr Leu Arg Thr Met Tyr
840 845 850 855

```

ttc gct tga aggccagaacg ctgttacctc actggataga agaaagcttt ccaagcccc 2837
Phe Ala

gagactgtgc	cacccaaatc	cagaggaaagc	aaggaggagg	gaggtgggg	agggaggagt	2897
gttagatgcc	ttgttccctt	ctatagaggt	ggtaaagag	tggggacacag	ggccagcaag	2957
acagaccacc	agccagaat	ctctgatatac	aacctatgt	cccccaccc	tcacccatc	3017
ttgtcacatc	tggccctgac	cccactggac	caaaaggggc	agactgtgt	ccccatatac	3077
acacagggt	ctatgtgac	tcacatgtgt	aaagactatc	gtttgacagc	ttgttaaggt	3137
caactctgt	gcccgtcaga	caaaagctgg	ttaggttgg	gtttgatact	ttatgtggga	3197
aagtgggg	cttggaaaag	ttgggtggag	gagggaaagga	tttttagga	gccttaatc	3257
aaaaaggact	agattttgtt	aagaagaaaa	atgaaccag	acccagatca	atattttagg	3317
atactatgt	ttttaatggg	ttcagaatcc	agttttagg	aagattttt	aatgggttt	3377
gttgccctc	ccccagctgc	caccccccac	tttaccccta	ttccctctc	tccacattt	3437
ctggcccccacc	ttacttctc	ttccctgacag	acatccagcc	ccttagataa	cttaaggcac	3497
tatggactt	agctttgtgg	tgacacgacc	ctgttcttc	ttccggccgt	gttgggttaa	3557
catgtccctc	cctgttaacgg	taatgtcga	gaactgcac	tttttttacc	ttttttttggg	3617
gaatgggg	gggggtggag	aggaggatga	ttggggaaagaa	atacccca	cccaacaaac	3677
ctccagccag	aaaggccat	atttgcatt	tgaaggaaatt	gacttctca	ttcattgagc	3737
tttttaaaag	atcacaacct	caagatgg	aaaatccatt	gacatttgc	ctttcaaaaca	3797
tgacaagtt	cggagctgt	gagatgacag	gccccctggcc	tttccactta	tgccctctt	3857
tcccttatt	cttccttacat	cccccggcc	ccaggcttgg	agttatcc	atagccat	3917
tcacttgg	ttttttttt	cccttgcatt	tcagaatctt	ttatgttcaa	ttttttttaa	3977
ctgggggtgc	ttataacaaa	aaacttttag	gtctaaaatg	agaaaaaaaga	gagaaaaacaa	4037
aatgttattt	ttataccata	acttgagtgt	attgccaaa	tttggaaatc	cttcccatgc	4097
ctgatgagtt	tatatcccag	aaacattgtag	ccatcagaat	gaactgtgt	ctgttattgt	4157
tctctgacct	ggcttaggtag	ggaggggg	gttacgc	caagatggg	tccaggctcc	4217
atcccttc	tgtgcagata	atacc	tttgcata	ctcccttct	ctgcacgtc	4277
ctgcactt	tcttgcgaat	gcatgtttt	cttccctct	gaetgttctc	tgacccttt	4337
gctcatctt	gattgcgt	tgtccctgtgg	acaggcttgg	gaattttgt	gttccttatt	4397
gctttgttt	acaaaaatgt	attttccctg	tttccact	agggatgtg	gttgggtggc	4457
atggactttt	ttttttttt	ttttttgtct	tgagacatgg	gttgggtgt	tcttcaggg	4517
ctggagaagg	ttgggtgtct	agtttgc	ctgttggct	tgaagca	atccccctg	4577
ccctttttcc	ttgactgttc	attttttcc	ttggggact	cttggatgg	ggaggtgca	4637
cttcagtccgt	gaattttcc	tttgaggac	ctgggttgg	atctatctt	atctgtgtat	4697
gaagctatgt	ttactttaga	cttagcc	gttggaggc	cagctggagg	aagaagggtc	4757
taatccctgt	cttgcataat	taacttacc	tttcccttcc	tttagtgc	ttttatgtac	4817

ccggattgtc tatgcaaaac aatctatccc aggttctgtt ctgggtgct acattgttca	4877
gcaactcaca aaacgtaca caaacatcca ttatggagaa agcatcagga ctgttgatgt	4937
actccctcctt tacttttc ctgctggctc cagcatgggg tgccctatag gcacaagccc	4997
agctgaagaa cagaatggag ggctctggga ggaggcagct cactggagag cctacattcc	5057
ttacacaagt gcctaaagag agtgtatgtca acactccatc tgccctgttc attgccttca	5117
tatacagct acttcgtgtt ctgtcaccc ttggggaggg gagttctctt gggacagtgg	5177
gctctgtat ttctccactt ggatacattt tggggctagg atcaggccac tattctgttga	5237
gggtccatc attcaccatc atttgcataat gtccataggc agcaggtggc agccttactt	5297
cccaagcaaca agtttgggtt ctctccctt ctctcttgc ctcaactctt ccagttgggtt	5357
ttcagctggg gcttgaatg catttttagc cctttgcgtt ggettatgcc attcaagaaa	5417
taaaaagcaa gagaatcagc ttgggcaat gacaagaat gagtttcttac tctgtatttt	5477
ttgtaaaaag ataattttt agacttggaa aataccggc ccttgcattt attcctgttt	5537
gaaagggtgt gcatcagat ggagaatgtt tggtggcagc aagtttggc tcatgtgtat	5597
ttgggttaag ttgtgtttt taccacaatg tcaaggaaatg gcttggggga ccccccggct	5657
cattccctta gttgggttcc tttttccctt ttttgcctt cttttccctt	5717
tcttttcttgc cttgggttcc ttccctttt ctttgcattca ctgtgttgc ttgtgtggcg	5777
gcctgcgttc ctgcctgttgc gcctgccttc ctgtgttgc atgtgtatgtt gaaatcttgc	5837
catggcttca atgtatcccaat ttgttagtgg cagggttgcagg cttagcttgc ttactgcaga	5897
agaccaagaa cctgttcccc aagcccaagag atgtccacccctt gggctggact gcccctcaagc	5957
ttatactata gaagagacaat tgacctggcc aacttgggttga aagttagggag ggtttcttgc	6017
atttccaca cttgttccat ctttgcgttgc gttttcttgc attttttctt ctaaatctgg	6077
ttcttttttctt ctttacccgtt ggcctggctt ttcttgcattt gttttttttt tgagttttt	6137
gggtatctgtt ggtttgtatg ttagggatg gacataaagg aaaaagatgtt atgagaagag	6197
aatggagaga atttgtatataa aagggtggaa aggagggacac ttgttgcatttgc ttgtttatcc	6257
agtccaaactt gatccataggat ggtatcgatgtt gttttttttt gttttttttt gttttttttt	6317
gctactgttgc ctgggaaatctt agggttacataa taaggccaa gaaggtaatc aaaaatttgc	6377
aactcccttaa aataggcttca atgtcccaacc ttgtatgttgc ttgtatgttgc ttgtatgttgc	6437
tagcttaagca gcagtgtttt tggatacttt ttttttctgtt ttgtatgttgc ttgtatgttgc	6497
caagatggcc agccaaagggtt gcactgtactt ttgtatgttgc ttgtatgttgc ttgtatgttgc	6557
gggtggacat tttttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt	6617
atcaggtagt aaaaatccatc tcaaaacttgc taaaaggccatc gttttttttt ggtttttttt ggtttttttt	6677
gacgttattt tttttttttt atggggccatc ggccaaatccatc ggtttttttt ggtttttttt ggtttttttt	6737
ttctttttttttaa aatctgtatca tggcaggatgtt atgcagggtt cttttttttt ggtttttttt ggtttttttt	6797
taaggcaggat tggcaggatgtt atgcagggtt cttttttttt ggtttttttt ggtttttttt ggtttttttt	6857
gcctttccatc tggcaggatgtt atgcagggtt cttttttttt ggtttttttt ggtttttttt ggtttttttt	6917
gacttagatc ttgtttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt	6977
aaaacaaaac agatgtatgtt gggaaagggtt gttttttttt ggtttttttt ggtttttttt ggtttttttt	7037
acccttccaaat tttttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt	7097
tagcaataatgaa gaaaatgttca atttttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt	7157
gatgttgcac ttgtttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt	7217
ttcttaaactt tttttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt	7277
cagctgtatca ttgtttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt	7337
gtgttgcac ttgtttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt ggtttttttt	7397
tgaagaaatc aacatcgtatca gtcaggatgtt gttttttttt ggtttttttt ggtttttttt ggtttttttt	7457

aacaaatggct tctatttcta a

7478

<210> 4
<211> 21
<212> DNA
<213> Artificial Sequence

220

<223> PCR Primer

<400> 4
gaggcctatgt tccggcatct c

31

<210> 5
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 5
agagtgtatc tccgacacgt ttcac

25

<210> 6
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Probe

<400> 6
aggatacaccg gacatcttcc stgg

20

<210> 7
<211> 19

<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 7
gaaggtaag gtcggagtc

19

<210> 8
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 8
gaagatggtg atgggatttc

20

<210> 9
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Probe

<400> 9
caagcttccc gtttcagcc

20

<210> 10
<211> 42500
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature

<222> 18344-18443, 25149-25248, 27228-27327, 27357
<223> n = A,T,C or G

<221> intron
<222> (820)...(5800)
<223> Intron 1

<221> intron
<222> (5985)...(9929)
<223> Intron 2

<221> intron
<222> (10051)...(10469)
<223> Intron 3

<221> intron
<222> (10652)...(11046)
<223> Intron 4

<221> intron
<222> (11184)...(11409)
<223> Intron 5

<221> intron
<222> (11545)...(11687)
<223> Intron 6

<221> intron
<222> (11776)...(12494)
<223> Intron 7

<221> intron
<222> (12643)...(18653)
<223> Intron 8

<221> intron
<222> (18774)...(19127)
<223> Intron 9

<221> intron
<222> (19251)...(19383)
<223> Intron 10

<221> intron

<222> (19518) ... (24114)

<223> Intron 11

<221> intron

<222> (24300) ... (30976)

<223> Intron 12

<221> intron

<222> (31137) ... (31318)

<223> Intron 13

<221> intron

<222> (31410) ... (32482)

<223> Intron 14

<221> intron

<222> (32678) ... (34727)

<223> Intron 15

<221> intron

<222> (34863) ... (35456)

<223> Intron 16

<221> intron

<222> (35559) ... (36189)

<223> Intron 17

<221> intron

<222> (36390) ... (36633)

<223> Intron 18

<221> intron

<222> (41435) ... (42500)

<223> Intron 19

<400> 10

tctgtacgtg cacttaagtt caaaactgtga catcttccag ggttagggccgc gtctctactt 60
atctgtggtc tcagcgtcca gcacatggcg tggaaaggagg ggtggcgctca gtgagtttag 120
tgacttaggg cggagaagaat cttctggag gcagtcgttt tgccagccaag gcttgaaggaa 180
tgagggtgal tggggaggaga ggtggggaggc agggcccctg ggcgttggag tgccaggggg 240
tctggaaatg aagtggggtt cccataatgt gtgcgcgcag ctgcgttgcga caggccgggg 300
ctgtgtgttag gtttggaggg acctatttg ggaaaagacaa cagggtctgaa ggctgttgc 360
gccccatgtc ctttcgcctt gccccactta taccactgcg cggttcaag gcacctctac 420
tggccgcctc cggccgggtc gcatggcgac ggggtgaccgc caggggccgc tgccttgggt 480

cctttaacaa gatccaaagg gaatgtacat taacgttgg aagcactgt actagactac 13740
ccttttttc tttttgtt ttttgagaca gагtctcgct ggagtgcагt ggcaccatct 13800
cggtcaactg taacctcctc agcctccagg ttctcatgcc tаgсcttca 13860
gtagcttaga ttacagggtg ggcaccagg gcccagataa gttttttttagt 13920
agagatgggg ttttgcctat ttggccacac tgatctctg gctcaagtg atctgcctc 13980
ctcgccctcc caaagtgtcg gattacggg atgagctgc aegcctggcc tacccttta 14040
cttttallca acagcagaag tcagatgcc cagaccaaa cttagtctt ctggtagt 14100
tcttaggatt cagaactca ctggaggagt taggcttgg gggaaagaga tccccaaac 14160
caagaactct gactgggtta atagctactg atgcacatga agggcaactg ttctctgagg 14220
tataaacaga ggtttttagg gacaatctt gctaagttaga tagtaggtt 14280
aagcagagat ttgttagcaa attaacat 14340
ataattttatg ttatgacta gaccttgatt tctgttgg 14400
cgagcttca ctatgttca tatacttca ggtgttgg 14460
gacaactgtt cagctgttctt ggagcttca ttctagaagg gggagataga caataatgg 14520
ataaaacacgt aaagttagtt cagatggta taatgttca aagaataataa aaatgggtt 14580
agggataga agtaaagggg gaagagggtt 14640
cttttaggag acatggc 14700
ctgagagaag agcccttccag gcaggaggaa gtacaaagg 14760
ggatctttt gggggataga cagaaggctt 14820
aaggatagg 14880
cttttaggag acatggc 14940
atccagcac tttggggatg 15000
ccagctactt gggagggtt 15060
cgctggattc tagccctggc aacagaggga gaccctgtt 15120
gctttatcg 15180
tttagtat 15240
actctctgaaa 15300
gcctgttagt 15360
atatgtgaaa 15420
ttttcaagg 15480
cagttatgg 15540
acatggatgt 15600
agatgtat 15660
gctctgtac 15720
ctgggttac 15780
caccacgct 15840
gaatggctc 15900
tacaggctg 15960
ttcccaagg 16020
tggccaggta 16080
gaacaatgt 16140
agtgcctca 16200
caaaatcatt 16260
tggtaaaaata 16320

agccccccatt taagccaggc tgcttggcaa cattggaaaag gtcctccagct ttttgcctt 21660
gtgcacatgt cacttcattg tagttctatt ctctatgtc ttttgcctt ctcccatgtc 21720
cttccctgtt ccattttttt tgggatgate tattttttt gocatctttt gatatggcc 21780
cagtaaaaccc agaaactcaa acttggaaaaga gtttacgtg gacacatgt ttttgcctt 21840
aagaatgttgg cttatgtc tgggtca gttttttt gttttttt gttttttt 21900
gcttaaggatc aatatttttca aatccatgtt acggatgtt gatgtttt gttttttt 21960
tacatagtaa gcaagatgtt aatccatgtt acggatgtt gatgtttt gttttttt 22020
gtcccttaagt gttttttt gttttttt gttttttt gttttttt 22080
tgagaaatgttggggaaaaca tgaagggtt gttttttt gttttttt 22140
tgatggatgagttttttt gttttttt gttttttt 22200
tacttttagt atatccatgtt taatccatgtt acggatgtt gatgtttt gttttttt 22260
acaatatttttca aatccatgtt acggatgtt gatgtttt gttttttt 22320
agaagatgttggggaaaaca ttttccatgtt gttttttt gttttttt 22380
acatactgttttttttca aatccatgtt acggatgtt gatgtttt gttttttt 22440
tactttaat ggttttttca aatccatgtt acggatgtt gatgtttt gttttttt 22500
ttttttttca aatccatgtt acggatgtt gatgtttt gttttttt 22560
gtatccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 22620
tgatgtctt ttttccatgtt acggatgtt gatgtttt gttttttt 22680
getcttgccttggatgttggatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 22740
gtttcatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 22800
catggccgccttggatgttggatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 22860
gggtttgccttggatgttggatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 22920
gattacatgttggatgttggatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 22980
tgaatttttca aatccatgtt acggatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23040
gcataatagtatccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23100
ctttttccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23160
cagctgttttca aatccatgtt acggatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23220
attaaattttca aatccatgtt acggatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23280
ctctactgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23340
agccaaaggatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23400
actcttttttca aatccatgtt acggatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23460
ggccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23520
aatccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23580
gggtttccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23640
tcaatataatccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23700
agtgtttagtggatgttggatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23760
ggggatccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23820
ttccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23880
aggaggatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 23940
ttgttccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 24000
aaaaacccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 24060
cagaaatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 24120
cacaatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 24180
ttttttccatgtt gtttttttca aatccatgtt acggatgtt gatgtttt gtttttttca aatccatgtt acggatgtt gatgtttt gttttttt 24240

atgccttcaa ctactaccc tacctaatta tcacacaaaat ttgcattc attcagact 29580
acttttga gcatcgaaacc atgaggccca tttgcttagt tgatatcctc acttagatga 29640
ccaaaaaact acttcagact caaaatgtct cacaataat ttatggctca tttttatttt 29700
attttatattt ttatattttt ttcttgagac ggagtcttgc tctgtcacc aggtctgtat 29760
gcagtgggtg tgatctcgctc tcaactgtaa ctctgcctcc caggttcaag tgattttct 29820
gcctcagct cccaaatgtac tgggattaca ggcacatgc accacacccca gtaatttt 29880
gtattttag tagataccgg gttcacat gttggccagg ctgttcttga actcctgacc 29940
tctgtatcca cccactgtag cttccaaag tgctggatc acaggctaa gccacccgt 30000
ccggctggcc tattttttt acagaagctg gaaactttaa agttatccat aaaaatttc 30060
ttttccctta ctcacatcat tagtctataa cttgagttcc ttaaatatct gtggaaatcca 30120
tttggtttcc tccgtctcaa caactcaccat atctttttt ttttttttc tggatgttga 30180
gtctcactct gtcgcccagg ctggagtca gttggacaaat ctgggtctcactaagctcc 30240
acttcctggg ttcaacccat tcttcgtctc cagtccttca agtagctggg actacagggtt 30300
ccgcacacca tgcctgtca atttttgtt ttttttagat agatgggtt tcaccatgtt 30360
aaccaggatg atctcaatc ctcgtactca tgatccaccc gcctcggtct cccaaatgtc 30420
tggattaca ggcgtgagcc accgcgtctc gcgttccaccg gtcttggtaa tctaggctac 30480
ccttatctcc tctgttaggt cagtcataatg accacatctt ttcttacaa catgtcccc 30540
ttgtcttct ttttagtgc tgcgttctca aacacatctt gctgtctt 30600
agoagggtgc atttttgtat gttgttctt ctgcgtggaa tgctcttctt caaactcccc 30660
ctcttcctcta agtccttgc tgcataatc ttatccatc acataatgtt gtttttttct 30720
cctttcttgc ttaggtttt atttccatc ttatgtgtt atttttccat gaaatttttt 30780
gttggtgc tttatcagcgt tgcataatc acgatttttta aaatttagtc ctatggat 30840
agcaacttgc gagaaggac ctatgtgtt tccgttcattt atttgtttcc ctgcaccc 30900
atacactgac tggcatctag taggcattca gtaaatattt gttgaatgtca ctaatcattt 30960
ctcttcctgc ctatgtgtt ggttaacact gtcggagata cactctggg aatggcttgc 31020
cagtggtgc aggttaacaa gtcggatcag accttcaccc agactctgtc caacccgtc 31080
ctcaagatca atgtcaact tgggtgcatt aacaacatc tagtccacca ccagcggtt 31140
gaactctgtt gtccacttgc cttgtcaag gtaccatgtt gggaaatgtat gaagagatag 31200
gaccctggcc aggcagactg aatcagacat aaggggggaga agagcagatg gggactctgt 31260
tgggtccaccc tagagaagac ccacccgtctc accattttgtt ttcttccttc ttgtctgtt 31320
ctgcgttcc tcaacccatc tgatgttcc tgggagcaga tgatccacac ccccccac 31380
gggatggaa aaaaacttctt acacacccatc tgatgtatgtt ctgtatgtt ctcataaagg 31440
ttcttccttc cgctctgtt cttccaaactt gcccatttgcatttcc agctctggct 31500
cttgagccctt cataagatgtt ccattttgtt cgcttccatc aatcccttccat cccctgtat 31560
ctcataaaagg tagctctgtt tggtgttcc ttccaggagat gtaatgttgc tgatggcc 31620
agactgtact cattctgtat cactctgtt ctgcgttgc atgttcttctt ttccccatgc 31680
ctgtttttgg gatgttagggg agggactata ttttttttgc aatcccttta aaggggatgtt 31740
cttagtggc agggactata tttgtctgc ccattccatc cccgtatgtt ataatagat 31800
agatgttctt ctatcttc tctgtactt tctgttccatc ttcttcttccat ggtttccaa 31860
ttgtctgttgc ttatccatc ttccaggat atatccatc aacccctaca ttctgtatg 31920
cacactggtc ttaacccatc taatgtcagg gaaacccatc aatatgttca tccctgtttt 31980
cctttggcc atcccttca ggtttggct gctgtcttgc ttgttaatgg cattttcttc 32040
atcaacccaca agaaacactgt tactatgttgc atgatccatc ggttagatttgc atttgtatg 32100
ggaaaaagga taaacttggg actgtatgttgc cccattttttt gatgttgc tgcataaactt 32160

tacttaaggc actatggcac ttagcttga agtacacaga ccctgttcc cttccggcc 37500
ctgggtggta accagtgc tccctgtaa ggtaaatgtc cagaactgca accttttgc 37560
ccttttttgg gggaaatgggg tgggggtggg agaggaggta gatggggaa aaataccca 37620
gacccaacaa acctccagcc agaaaggccg ctatgtca ttgaaggaa ttgactttct 37680
cattcatgtc gctttttaaa agatcacaa ctcacatgg taaaatcga ttgacatttgc 37740
cacttcaaa catgacaaatg ctccggatgc ctgagatgc agggccctgg cctttccact 37800
tatgcctctt ttctcttca ctcacccccc gcccaggatc ggatgttact 37860
tcatacgtt ttctacttgc ggtttttttt ctcccttgat ggtaaactt ctatgttgc 37920
aatattttttt aactggggtg tcttataaca aaaaacttctt aggtctaaaaa tgagaaaaaa 37980
gagagaaaaac aaaaatgtt ttttataccca taacttgcgt gtattggca aatttggaa 38040
tccttccat gcctgtatgg tttatatccc agaaacatgg agccatcaga atgaatgtg 38100
tacccgtattt ttctcttgc ctggatggat agggaggggg tggttatcgc cccaaatgtt 38160
ggtcacggctt ccatcttcc ttgtgcaga taatacttctt ttctgttat agctccctt 38220
ctctgcacttgc tctgtcactt ttcttgcgtt gtgcacatctt ttctttccccc ttgactgtcc 38280
ttgtacccctt tggtctatcc tagatggcgt tgggttccctt ggacaggctg gggaaatttgc 38340
ctgtctccat ttgttctgtt ttacaaaaat gaatttttccca ttgggttccca ctaggcatg 38400
ttgggtgggtg gcatggactt ttttttttttt ttttttttttt ttgttgcgtt ggggttggc 38460
tgttcttgcgt gactggagaa ggtgggggtt ctactgttgc ctgttgcgttgc ttgttgcgtt 38520
gcataccccc tggccctttt ccttgcgttgc ttttttttgc tggcccccac tggcttggat 38580
ggggatgtgc aacttcgttgc tggatatttcc ttgttgcgttgc gcttgggtt ggatctatcc 38640
tgatcttgcgtt atgaagccat gattacttta gaccttagccc aggttggag gccagctgg 38700
ggaagaaggg tctaaatccctt ggcctgtaga tttagaactt ccattttccctt cccttagctg 38760
cccttgcgtat accccggattt gctatgcataa aacaatcttcc ccagggttgc ttctgggttgc 38820
ctatcattttt cagcaacttca caaaatgttgc cacaatccat cattatggag aaagcatcg 38880
gacttttgcgttgc taacttccctt ttacttttgc tctgttgcgttgc ttttttttttgc 38940
aggcacaacgc ccacgttgc aacaaatgttgc agggcttgcgtt gggggggatggc 39000
agccatcattt ctttacacaaat gtccttgcgttgc ttttttttttgc 39060
ccatttgcctt catatacattt ctacttgcgttgc ttctgttccat ctttggggatgg gggatgttcc 39120
ctgggacatgtt gggcttgcgttgc ttttttttttgc ttttttttttgc 39180
actatcttgcgttgc ttttttttttgc ttttttttttgc 39240
gcacatgttgc ttttttttttgc ttttttttttgc 39300
ctccatgttgc ttttttttttgc ttttttttttgc 39360
ccatttcaaaaat aaaaaaaatggc aagagaatccat gtttttttttgc 39420
actctgttgc ttttttttttgc ttttttttttgc 39480
tttatttttttgc ttttttttttgc 39540
gctcatgttgc ttttttttttgc ttttttttttgc 39600
gaccccccacgc ctttccatgttgc ttttttttttgc 39660
tccttttccatgttgc ttttttttttgc 39720
gcttgcgttgc ttttttttttgc 39780
atgaaatcttgc ttttttttttgc 39840
cttgcacttgc ttttttttttgc 39900
ctggcccttcaaaat gtttttttttgc 39960
agggttgcgttgc ttttttttttgc 40020
ttcttaaatcttgc ttttttttttgc 40080

<210> 11

<211> 20

```
<212> DNA
<213> Artificial Sequence
<220>
<223> Antisense Oligonucleotide
<400> 11
gacccctccag cagctcccac
```

20

```
<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 12
ggagactgt aagtccagcg
```

20

```
<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 13
ctaaaaacttaa ttggccaggaa
```

20

<210> 14
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<210> 18
<211> 20
<212> DNA
<213> Artificial Sequence

522

<223> Antisense Oligonucleotide

<400> 18

cacatccaaqq gcttgacag

20

<210> 19
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 19

catggcaggg cgcacagact

20

<210> 20
<211> 20
<212> DNA
<213> Artificial Sequence

52203

<223> Antisense Oligonucleotide

<400> 20

aqtqqctqaq acatcaatgt

20

<210> 21
<211> 20
<212> DNA
<213> Artificial Sequence

<400> 24

20

<210> 25
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 25
gtcaqcttct taatacagcg

20

<210> 26
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 26
ctggttgtcg gtcagcttct

20

<210> 27
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 27
gatctcctcc tqtgtctgtctg

20

<210> 28

<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 28
gcattttca tcaggcgact

20

<210> 29
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 29
ctccgtcatg tcatcttca

20

<210> 30
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 30
ctgattgggt gtggcaatgg

20

<210> 31
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

102011-3200004

<223> Antisense Oligonucleotide

<400> 31

ctgtgaagtt cttgagcacc

20

<210> 32

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 32

catccttggaa aatcttccgc

20

<210> 33

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 33

caataatgag ctgcagccct

20

<210> 34

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 34

tcacacctcagc atacacccggc

20

<210> 35
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 35
ctgcctacca ctgctgtgat

20

<210> 36
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 36
ctcttcccaa ttcgctcatt

20

<210> 37
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 37
tgcgtggctg cacagataga

20

<210> 38
<211> 20
<212> DNA

2000-07-08 - 110001

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 38

gtcggctggc gccctggatg

20

<210> 39

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 39

ttgtctcgcc ccgatatgtg

20

<210> 40

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 40

cctgggtgaac ctgcacggct

20

<210> 41

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 41
ctggatttgg gtggcacagc

20

<210> 42
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 42
caaggcatcc tacactcctc

20

<210> 43
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 43
tgagtcacat gagacacacctg

20

<210> 44
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 44
ccaaagctgtc aagcatgagt

20

<210> 45
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 45
accttaccaa gctgtcaaggc

20

<210> 46
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 46
cccatctaaa gatatcaaacc

20

<210> 47
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 47
tggacagaga ggaataaggg

20

<210> 48
<211> 20
<212> DNA
<213> Artificial Sequence

100007028-1418034

<220>

<223> Antisense Oligonucleotide

<400> 48

gctccgagac ttgtcatgtt

20

<210> 49

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 49

aatcaggta c acagttcatt

20

<210> 50

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 50

ctccctacct agccaggta

20

<210> 51

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 51

10236178-1102801

agctagaacc accacaccttct

20

<210> 52

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 52

agattgtttt gcatagc当地

20

<210> 53

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 53

aatgttagccca accagaacag

20

<210> 54

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 54

gtgtacgtt ttgtgagttg

20

<210> 55

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 55

tagggcaccc catgctgttag

20

<210> 56

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 56

tcttcagctg ggcttgtgcc

20

<210> 57

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 57

aggcacttgt gtaaggaatg

20

<210> 58

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

208041-8707001

<223> Antisense Oligonucleotide

<400> 58

tgtatccaag tggagaacat

20

<210> 59

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 59

tgcaaatgct ggtgaatgac

20

<210> 60

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 60

aggctgccac ctgctcccta

20

<210> 61

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 61

ctggagagag tgaggcaaag

20

10007078-41405014

<210> 62
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 62
cccaagctgaa aaccaactgg

20

<210> 63
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 63
agctccaaagg agtggacagg

20

<210> 64
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 64
tttaggagctt tttaggaaag

20

<210> 65
<211> 20
<212> DNA
<213> Artificial Sequence

<400> 68
taagaaggaa ggtattccag

20

<210> 69
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 69
atagtaaaaaa gtgccttgca

20

<210> 70
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 70
accagaaaaat acctccttcc

20

<210> 71
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 71
gaagaaaaatc tcccttcccc

20

<210> 72

<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 72
tcctctgtaa agaagaaaaat 20

<210> 73
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 73
gactcagtgc attcaacaaaa 20

<210> 74
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 74
ctggactgtg tgcacagggaa 20

<210> 75
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 75

cacatggctg ctaagtgc aa

20

<210> 76

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 76

ccccatccat gctggacttg

20

<210> 77

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 77

gatgttgctt gtttcagaag

20

<210> 78

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 78

tgttgtcttt ataaaacaca

20

<210> 79
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 79
attttcatc actccagagc

20

<210> 80
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 80
ggatagtacg caaggccacc

20

<210> 81
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 81
ctgcactcca gcctggacga

20

<210> 82
<211> 20
<212> DNA

<400> 85
tcatccaaa agaaatggac

20

<210> 86
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 86
caagcagctg attcctgtgc

20

<210> 87
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 87
acctggccca gcatagcctg

20

<210> 88
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 88
aggaggcttg gcatcagaag

20